

LISTING OF CLAIMS

1. (Currently Amended) A method of manufacturing an electric wiring of a semiconductor device including a semiconductor element formed on a semiconductor substrate and an aluminum alloy wiring connected to the semiconductor element on the semiconductor substrate, the method comprising:

forming an aluminum alloy layer on the semiconductor substrate, the aluminum alloy layer containing metal ~~which restricting an~~ that restricts movement of aluminum;

forming TiN film on the aluminum alloy layer by using ~~spatteringsputtering~~, sputtering, wherein a DC power of the ~~spatteringsputtering~~ is set to or less than 5.5 W/cm^2 so that a formed TiN film ~~being~~ is rich with reactivity.

2. (Currently Amended) The method of manufacturing ~~an electric~~ the electric wiring according to claim 1, wherein the TiN film is formed to have a thickness of 5 nm or more.

3. (Currently Amended) The method of manufacturing ~~an electric~~ the electric wiring according to claim 1, wherein the TiN film is formed under a condition where a temperature of an atmosphere surrounding the semiconductor substrate during the ~~spatteringsputtering~~ is approximately 180°C or less.

4. (Currently Amended) A method of manufacturing ~~an electric~~ the electric wiring of a semiconductor device including a semiconductor element formed on a semiconductor substrate and an aluminum alloy wiring connected to the semiconductor element on the semiconductor substrate, the method comprising:

forming an aluminum alloy layer on the semiconductor substrate, the aluminum alloy layer containing metal ~~which restricting an~~ that restricts movement of aluminum;

forming TiN film on the aluminum alloy layer by using ~~sputteringsputtering~~, the ~~sputteringsputtering~~ being conducted using TiN as a target and being conducted without containing N₂ gas in an atmosphere surrounding the semiconductor substrate.

5. (Currently Amended) The method of manufacturing ~~an electric~~ the electric wiring according to claim 1, wherein the ~~sputteringsputtering~~ is conducted using TiN, formed on a surface of a Ti target, as the target of the ~~sputteringsputtering~~.

6. (Currently Amended) The method of manufacturing ~~an electric~~ the electric wiring according to claim 5, wherein the step of forming TiN film on the aluminum alloy layer including:

first ~~sputteringsputtering~~ the TiN film by using the TiN formed on the surface of the Ti target in the atmosphere without containing N₂ gas; and

second ~~sputteringsputtering~~ another TiN film on the TiN formed in the first ~~sputteringsputtering~~ in the atmosphere containing N₂ gas.

7. (Currently Amended) The method of manufacturing ~~an electric~~ the electric wiring according to claim 4, wherein the step of forming TiN film on the aluminum alloy layer including:

first ~~sputteringsputtering~~ the TiN film by using the TiN formed on the surface of the Ti target in the atmosphere without containing N₂ gas; and

second ~~sputtering~~sputtering another TiN film on the TiN formed in the first ~~sputtering~~sputtering in the atmosphere containing N₂ gas, after the TiN is formed on an entire surface of the aluminum alloy layer in the first ~~sputtering~~sputtering.

8. (Currently Amended) The method of manufacturing ~~an electric~~the electric wiring according to claim 4, wherein the ~~sputtering~~sputtering is conducted in a condition where a DC power of the ~~sputtering~~sputtering is set to equal to or less than 5.5 W/cm² so that the formed TiN film is rich with reactivity.

Claims 9-15 (Canceled).